



## **Summary Annual Report**

for the State Employees' Retirement System, a Pension and Other Postemployment Benefit Trust Fund of the State of Michigan Fiscal Year Ended Sept. 30, 2018

Prepared by
Office of Retirement Services
Department of Technology, Management and Budget

## A Message From The Director



Director Kerrie Vanden Bosch

The Department of Technology, Management and Budget (DTMB)
Office of Retirement Services (ORS) is pleased to present the Summary
Annual Report for the State Employees' Retirement System (SERS),
henceforth referred to as the System, for the
fiscal year ended Sept. 30, 2018.

Average Admin. Cost

ORS provides retirement and related retiree healthcare plans to help attract, retain, and reward a highly qualified workforce.

ORS is able to cost-effectively provide these benefits to retirees. In 2017, the total defined benefit (DB) pension administration cost was \$57 per active member and retiree. This was

\$37 below the peer average of \$94 per active member and retiree (CEM Benchmarking).

## **Accomplishments**

## Dedicated Gains Policy Successfully Reduces Assumed Rate of Return

In summer 2017, the DTMB director and the retirement board adopted a mechanism that gradually reduces the assumed rate of investment return (AROR). This policy was necessary to align the AROR with industry trends toward more prudent investment expectations. Whenever investment returns exceed the assumed return (e.g., we achieve 9.00% instead of the expected 7.50%), the dedicated gains policy uses those excess returns to lower the AROR going forward. This is done without increasing unfunded actuarial accrued liabilities (UAAL) and largely offsetting contribution increases toward the UAAL from the employer. Excess investment returns in fiscal year 2018 resulted in the pension and Other Postemployment Benefit (OPEB) ARORs being reduced from 7.00% to 6.70% and 6.90% respectively, beginning with the actuarial valuation as of Sept. 30, 2018.

## **Actuarial Experience Studies Result in Adjustments to Assumptions**

Every five years the plan actuary evaluates how well the assumptions used to determine system liabilities and set employer contributions match the real experience of the plan. These experience studies are statutorily required and are an industry best practice that allows the System to make adjustments that ensure the System is valued and funded

properly. The most recent five-year cycle concluded on Sept. 30, 2017, and the actuary delivered its evaluation in spring 2018. The results of the evaluation are more conservative economic and demographic assumptions. The actuary and ORS collaborated to provide detailed information to department leaders and the retirement board about the proposed adjustments and the impact to the state and school budgets. The proposed changes were approved for use with the actuarial valuations beginning Sept. 30, 2018. These changes will protect the long-term security of both the pension and healthcare trusts.

### **Call Center Upgrade**

ORS is modernizing its toll-free phone service from a dial-tone system to a modern voice over internet solution. This effort involved a sweeping overhaul of the existing software and hardware to ensure optimum performance, a redesign and rewrite of the call routing software, and improved security. Customers will reach a call agent more quickly because of streamlined menus and more automatic methods for authenticating the caller. ORS will have more flexibility in the way new menu options and associated queues are used for seasonal business topics. In total, the new system is more secure, more stable, provides a better experience for customers and gives ORS ways to adapt to changes in demand.

## Accomplishments, Continued

### **Redesign of Insurance Systems**

In spring 2018, ORS successfully deployed the redesign of insurance eligibility and enrollment systems. The redesign applied a flexible, rules-based approach to system development that allows ORS to update business rules to match insurance offerings, regulations or requirements more quickly. The new system improves both the customer and staff experience with insurance enrollment management. New customer-focused features include: per-person itemized enrollment cost, a shopping cart so customers can clearly understand their costs, printable bills available in miAccount, and online account management for COBRA enrollees.

#### **Mobile Application Launch**

ORS developed a mobile application for members and retirees of the Defined Benefit (DB) plans. The highlight of this new application is the ability to upload documents directly to ORS. This feature allows the user to take a picture of a form, birth certificate, or other insurance proof and send the document(s) securely to ORS, eliminating

the need to locate a fax machine or rely on standard postal delivery. The application also allows ORS to send custom-crafted alerts and announcements to targeted user-types, based on their retirement system and account status. Active members will be able to estimate their pensions, update beneficiaries and dependents, and update contact information. Retirees will be able to manage their direct deposit, update tax withholdings, update dependents, and view their payment history.

### **Imaging Enhancements**

The ORS team depends on images of customer correspondence. These images are carefully indexed and stored in a way that call agents and processors can access them quickly and easily. This year, significant upgrades of both the hardware and the software applications for document storage and retrieval were completed and will ensure that this system is stable and secure for years to come. A pivotal change was a move away from a complex, custom-built solution to more standardized tools that are easier to maintain.

### **Honors**

## **Government Finance Officers Association Award**

The Government Finance Officers Association (GFOA) of the United States and Canada awarded the retirement system with the Certificate of Achievement for Excellence in Financial Reporting for our fiscal year 2017 Comprehensive Annual Financial Report (CAFR). This marks the 27th consecutive year ORS has received this prestigious award.

#### **Public Pension Standards Award**

ORS was awarded the 2018 Standards
Award from the Public Pension Coordinating
Councils Standards Program (PPCC) for
both funding and administration. ORS has
received this award every year since 2004.
The PPCC Standards reflect expectations for
public retirement system management and
administration and serve as a benchmark
for all DB public plans to be measured.

# About The State Employees' Retirement System

This report is issued in compliance with the Public Employee Retirement System Investment Act, 1965 Public Act (PA) 314, and the State Employees' Retirement Act, 1943 PA 240, both as amended. The contents come from the complete SERS 2018 CAFR, available on our website at **michigan.gov/orsstatedb**, the annual actuarial valuations as of Sept. 30, 2018, and additional analysis performed after Sept. 30, 2018.

State employees' pensions are protected by Michigan's Constitution. The System's net assets are held in trust to meet future benefit payments. ORS also administers the State of Michigan 401(k) Plan for state employees hired after March 31, 1997.

The state treasurer is the investment fiduciary and custodian of all investments of the System pursuant to state law.

## **Executive Summary**

The actuarial value of the assets as of Sept. 30, 2018, was \$15.1 billion for pension and OPEB, and the total actuarial accrued liability (AAL) was \$29.6 billion resulting in a total UAAL of \$14.6 billion.

The System's assets increased by \$1.1 billion in fiscal year 2018. Asset increases were primarily due to positive investment experience and contributions from the state and employees. The AAL for pension and OPEB increased by \$2.1 billion primarily due to assumption changes adopted with the most recent actuarial experience study and the reduction in the AROR for pension and OPEB due to the dedicated gains policy. The pension AROR was reduced to 6.70% from 7.00%. The OPEB AROR was reduced to 6.90% from 7.35%.

| Statement of Assets                 | and Liabilities      |                   |
|-------------------------------------|----------------------|-------------------|
| FY 2018                             | Pension <sup>1</sup> | OPEB <sup>2</sup> |
| AAL                                 | \$18,995,243,989     | \$10,630,303,662  |
| Actuarial Value of Assets           | \$12,494,360,972     | \$2,561,630,541   |
| UAAL                                | \$6,500,883,017      | \$8,068,673,121   |
| Funding Ratio                       | 65.78%               | 24.10%            |
| FY 2017                             | Pension <sup>3</sup> | OPEB⁴             |
| AAL                                 | \$17,880,548,907     | \$9,595,426,153   |
| Actuarial Value of Assets           | \$11,883,784,188     | \$2,047,228,760   |
| UAAL                                | \$5,996,764,719      | \$7,548,197,393   |
| Funding Ratio                       | 66.46%               | 21.34%            |
| 2018 SERS Pension Actuarial Valuati | on Page R-1          |                   |

Funding ratios decreased slightly by 0.68 percentage points for pension and increased by 2.76 percentage points for OPEB as a result of the assumption changes noted above.

## **Membership**

Members of the DB plan include employees of the State of Michigan and its noncentral agencies as listed below:

- Classified or unclassified state employees, including civil service employees, appointed officials in the executive branch, and employees of the legislative and judiciary branches who were hired before March 31, 1997.
- Employees who work for the Business Enterprise Program, Mackinac Island State Park, or Michigan State Bar, and were hired before March 31, 1997.
- Employees hired before Oct. 1, 1996, and employed by the American Legion, American Veterans, Disabled American Veterans, Marine Corps League, Military Order of the Purple Heart, Wayne Co. Clerk Recorders Court, Third Circuit Court, or 36th District Court.

| Plan Membership and Retirement A as of Sept. 30, 2018  | Allowances         |
|--|--------------------|
| Membership¹  |                    |
| Retirees and Beneficiaries Currently Receiving Ber   | nefits             |
| Regular Benefits   | 49,385             |
| Survivor Benefits  | 7,364              |
| Disability Benefits  | 3,261              |
| Total  | 60,010             |
| Current Employees  |                    |
| Vested   | 9,323              |
| Non-vested   | 150                |
| Total <sup>2</sup>   | 9,473              |
| Inactive Employees   |                    |
| Entitled to benefits and not yet receiving them  | 3,472              |
| Total All Members  | 72,955             |
| <ol> <li>CAFR for the fiscal year ended Sept. 30, 2018, Page 23.</li> <li>Includes DB members who converted to the Defined Cont plan and employees who elected to participate only in the</li> </ol> |                    |
| Retirement Allowances <sup>3</sup>   |                    |
| Average annual retirement allowance  | \$22,764           |
| Total annual retirement allowances being paid (in thousands)   | \$1,366,045        |
| 3. Pension Actuarial Valuation for the fiscal year ended Sept. 30  | 0. 2018. Page D-2. |

### **Assets And Liabilities**

The System's total assets on a market basis as of Sept. 30, 2018, were \$15.7 billion, mostly composed of cash, investments, and contributions due from the employer.

Total liabilities as of Sept. 30, 2018, were \$711.9 million and include accounts payable, unearned revenue, and obligations under securities lending.

Total net assets held in trust for pension and OPEB increased \$1.1 billion from the previous year.

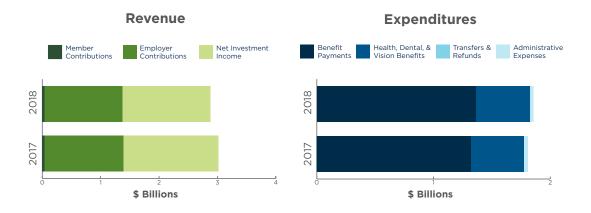
| Assets and Liabilities <sup>1</sup> (Doll (Combined Pension and OPE   | n Thousa                             | nds) |                              |
|---|--------------------------------------|------|------------------------------|
| Assets  | FY 2017                              |      | FY 2018                      |
| Equity in Common Cash   | \$<br>138,049                        | \$   | 133,340                      |
| Receivables   | 151,760                              |      | 136,782                      |
| Investments   | 13,599,587                           |      | 14,734,342                   |
| Securities Lending Collateral   | 868,542                              |      | 668,255                      |
| Total Assets  | \$<br>14,757,937                     | \$   | 15,672,720                   |
| Liabilities   | FY 2017                              |      | FY 2018                      |
|   |                                      |      |                              |
| Warrants Outstanding  | \$<br>116                            | \$   | -                            |
|   | \$                                   | \$   | -<br>27                      |
| Warrants Outstanding  | \$<br>116                            | \$   | -                            |
| Warrants Outstanding<br>Unearned Revenue  | \$<br>116<br>27                      | \$   | -<br>27                      |
| Warrants Outstanding Unearned Revenue Accounts Payable and Other Liabilities                                      | \$<br>116<br>27<br>35,455            | \$   | -<br>27<br>43,434            |
| Warrants Outstanding Unearned Revenue Accounts Payable and Other Liabilities Obligations Under Securities Lending | \$<br>116<br>27<br>35,455<br>868,052 | \$   | -<br>27<br>43,434<br>668,435 |

## Revenue And Expenditures, Change In Net Assets

The reserves needed to finance pension and OPEB are accumulated through the collection of employer and employee contributions including earnings on investments.

Contributions and net investment income for fiscal year 2018 totaled \$3 billion. The primary expenses of the System include the payment of pension benefits to members and beneficiaries, payment for health, dental and vision benefits, refunds of contributions to former members, and the cost of administering the System.

| Additions and Deductions <sup>1</sup> (Dolla | ars | In Thousa  | ands | )          |
|--|-----|------------|------|------------|
| Additions                                    |     | FY 2017    |      | FY 2018    |
| Member Contributions                         | \$  | 40,866     | \$   | 35,598     |
| Employer Contributions                       |     | 1,346,699  |      | 1,339,624  |
| Other Governmental Contributions             |     | 59,762     |      | 83,620     |
| Net Investment Income (Loss)                 |     | 1,629,351  |      | 1,503,048  |
| Transfer and Miscellaneous                   |     | 20         |      | -          |
| Miscellaneous Income                         |     | 1,052      |      | 236        |
| Total Additions                              | \$  | 3,077,750  | \$   | 2,962,126  |
| Deductions                                   |     | FY 2017    |      | FY 2018    |
| Pension Benefits                             | \$  | 1,322,339  | \$   | 1,362,276  |
| Healthcare Benefits                          |     | 452,300    |      | 461,376    |
| Refunds and Transfers to Other Systems       |     | 346        |      | 220        |
| Administrative and Other Expenses            |     | 30,602     |      | 31,720     |
| Total Deductions                             | \$  | 1,805,588  | \$   | 1,855,591  |
| Net Position                                 |     | FY 2017    |      | FY 2018    |
| Net Increase (Decrease) in Net Position      | \$  | 1,272,163  | \$   | 1,106,535  |
| Beginning of Year                            |     | 12,582,125 |      | 13,854,288 |
| End of Year                                  | \$  | 13,854,288 | \$   | 14,960,823 |
|  |     |            |      |            |



## **2018 Plan Expenditures**

| Pension Plan Administrative and Other Expenses   |              | Dollars            |
|--|--------------|--------------------|
| These expenditures are the administrative costs of running the retirement system and are paid by DTMB-Office of Retireme Services through an annual appropriation. | ent Services | and DTMB-Financial |
| Personnel Services   |              |                    |
| Staff Salaries   | \$           | 1,649,698          |
| Retirement and Social Security   |              | 930,633            |
| Other Fringe Benefits  |              | 318,512            |
| Subtotal   | \$           | 2,898,843          |
| Professional Services  |              |                    |
| Accounting   | \$           | 329,993            |
| Actuarial  |              | 205,02             |
| Attorney General   |              | 186,344            |
| Audit  |              | 138,93             |
| Consulting   |              | 37,282             |
| Medical  |              | 199,521            |
| Subtotal   | \$           | 1,097,092          |
| Building and Equipment   |              |                    |
| Building Rentals   | \$           | 237,067            |
| Equipment Purchase, Maintenance, and Rentals   |              | 7,433              |
| Subtotal   | \$           | 244,500            |
| Miscellaneous  |              |                    |
| Travel and Board Meetings (Excluding Travel and Education for Board Members)   | \$           | 4,219              |
| Office Supplies  |              | 2,242              |
| Postage, Telephone, and Other  |              | 446,843            |
| Printing   |              | 61,550             |
| Technological Support  |              | 1,732,336          |
| Subtotal   | \$           | 2,247,190          |
| Travel and Education for Board Members   |              | 795                |
| Total Administrative and Other Expenses  | \$           | 6,488,420          |

## 2018 Plan Expenditures, Continued

|   |                      | Dollars   |
|---|----------------------|---|
| These expenditures are for self-insurance of the health and dental plans and are paid from the retirement system's trus   | t fund.              |   |
| Staff Salaries  | \$                   | 459,335   |
| Health Fees   |                      | 22,806,138  |
| Dental Fees   |                      | 1,707,140   |
| Vision Fees   |                      | 259,020   |
| Total Health, Dental, and Vision Expenses   | \$                   | 25,231,633  |
| Investment Expenses   |                      | Dollars   |
| $These \ expenditures \ are \ related \ to \ the \ Department \ of \ Treasury's \ Bureau \ of \ Investments \ for \ managing \ the \ retirement \ system's \ trust \ fund.$   | stem's assets a      | and are paid from the                               |
| Real Estate Operating Expenses  | \$                   | 808,887   |
| Securities Lending Expenses   |                      | 14,162,300  |
| Other Investment Expenses   |                      |   |
| ORS-Investment Expenses   |                      | 3,581,166   |
| Custody Fees  |                      | 335,807   |
| Management Fees   |                      | 54,885,137  |
| Research Fees   |                      | 1,051,195   |
| Total Investment Expenses   | \$                   | 74,824,492  |
| Benefits Paid to Members  |                      | Dollars   |
| These are the actual retirement benefits paid to members of the retirement system.  |                      |   |
| Pension Benefits  | \$                   | 1,362,275,032                                       |
| Health Benefits   |                      | 419,259,759   |
| Dental/Vision Benefits  |                      | 38,483,134  |
| Personal Healthcare   |                      | 3,560,830   |
|   |                      | 72,026  |
| Health Reimbursement Account  |                      | 220,058   |
| Health Reimbursement Account Refunds of Member Contributions  |                      |   |
|   | \$                   | 1,823,870,839                                       |
| Refunds of Member Contributions   | \$                   |   |
| Refunds of Member Contributions  Total Payments to Members  |                      | Dollars   |
| Refunds of Member Contributions  Total Payments to Members  Soft Dollar Expenses <sup>2</sup>   |                      | Dollars   |
| Refunds of Member Contributions  Total Payments to Members  Soft Dollar Expenses <sup>2</sup> These expenditures are for research provided by the retirement system's service providers and are incorporated into the   |                      | 1,823,870,839  Dollars  ees and commissions.  3,558 |
| Refunds of Member Contributions  Total Payments to Members  Soft Dollar Expenses <sup>2</sup> These expenditures are for research provided by the retirement system's service providers and are incorporated into the Bass Trading International Group (BTIG)   | ne brokerage f       | <b>Dollars</b> ees and commissions.                 |
| Refunds of Member Contributions  Total Payments to Members  Soft Dollar Expenses <sup>2</sup> These expenditures are for research provided by the retirement system's service providers and are incorporated into the Bass Trading International Group (BTIG)  MacroMavens Newsletter                       | ne brokerage f       | <b>Dollars</b> ees and commissions.                 |
| Refunds of Member Contributions  Total Payments to Members  Soft Dollar Expenses <sup>2</sup> These expenditures are for research provided by the retirement system's service providers and are incorporated into the Bass Trading International Group (BTIG)  MacroMavens Newsletter  High Tech Strategist | ne brokerage f<br>\$ | Dollars ees and commissions.  3,558                 |

## 2019 Budget For Plan Expenditures

| Budget for Plan Expenses for Fiscal Year Ending Sept. 30, 2019 <sup>1</sup>  |               |                   |
|--|---------------|-------------------|
| Pension Plan Administrative and Other Expenses   |               | Dollars           |
| These expenditures are the administrative costs of running the retirement system and are paid by DTMB-Office of Retireme Services through an annual appropriation. | nt Services a | nd DTMB-Financial |
| Personnel Services   |               |                   |
| Staff Salaries   | \$            | 1,446,138         |
| Retirement and Social Security   |               | 1,308,479         |
| Other Fringe Benefits  |               | 486,033           |
| Subtotal   | \$            | 3,240,651         |
| Professional Services  |               |                   |
| Accounting   | \$            | 399,292           |
| Actuarial  |               | 128,520           |
| Attorney General   |               | 126,714           |
| Audit  |               | 172,200           |
| Consulting   |               | 60,098            |
| Medical  |               | 207,060           |
| Subtotal   | \$            | 1,093,883         |
| Building and Equipment   |               |                   |
| Building Rentals   | \$            | 169,159           |
| Equipment Purchase, Maintenance, and Rentals   |               | 14,108            |
| Subtotal   | \$            | 183,267           |
| Miscellaneous  |               |                   |
| Travel and Board Meetings (Excluding Travel and Education for Board Members)   | \$            | 11,026            |
| Office Supplies  |               | 3,615             |
| Postage, Telephone, and Other  |               | 356,954           |
| Printing   |               | 52,800            |
| Technological Support  |               | 1,992,157         |
| Subtotal   | \$            | 2,416,553         |
| Travel and Education for Board Members   |               | 1,035             |
|  |               |                   |

## 2019 Budget, Continued

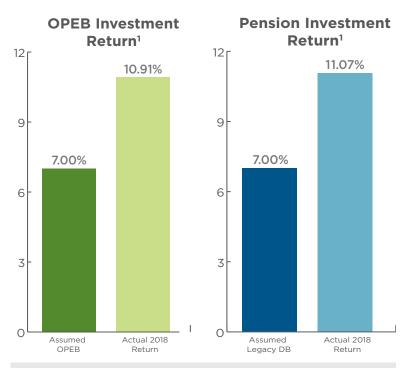
| Health, Dental, and Vision Plan Expenses   |                  | Dollars               |
|--|------------------|-----------------------|
| These expenditures are for self-insurance of the health and dental plans and are paid from the retirement system's tru                             | ıst fund.        |                       |
| Staff Salaries   | \$               | 402,656               |
| Health Fees  |                  | 23,656,670            |
| Dental Fees  |                  | 1,774,818             |
| Vision Fees  |                  | 222,540               |
| Total Health, Dental, and Vision Expenses  | \$               | 26,056,685            |
| Investment Expenses  |                  | Dollars               |
| These expenditures are related to the Department of Treasury's Bureau of Investments for managing the retirement syretirement system's trust fund. | ystem's assets a | and are paid from the |
| Real Estate Operating Expenses   | \$               | 1,003,020             |
| Securities Lending Expenses  |                  | 17,561,252            |
| Other Investment Expenses  |                  |                       |
| ORS-Investment Expenses  |                  | 4,440,646             |
| Custody Fees   |                  | 416,401               |
| Management Fees  |                  | 68,057,570            |
| Research Fees  |                  | 1,303,482             |
| Total Investment Expenses  | \$               | 92,782,370            |
| Benefits Paid to Members   |                  | Dollars               |
| These are the projected retirement benefits paid to members of the retirement system.  |                  |                       |
| Pension Benefits   | \$               | 1,403,143,283         |
| Health Benefits  |                  | 431,837,552           |
| Dental/Vision Benefits   |                  | 36,558,977            |
| Personal Healthcare  |                  | 3,952,521             |
| Health Reimbursement Account   |                  | 131,087               |
| Refunds of Member Contributions  |                  | 140,837               |
| Total Payments to Members  | \$               | 1,875,764,258         |
| Soft Dollar Expenses <sup>2</sup>  |                  | Dollars               |
| These expenditures are for research provided by the retirement system's service providers and are incorporated into t                              | the brokerage f  | ees and commissions.  |
| Bass Trading International Group (BTIG)  |                  |                       |
| MacroMavens Newsletter   | \$               | 3,558                 |
| High Tech Strategist   |                  | 30                    |
| Total Soft Dollar Expenditures   | \$               | 3,588                 |
|  |                  | 0 001 E40 000         |
| Total of All Sections  | \$               | 2,001,542,289         |

### **Assumed And Actual Investment Returns**

The state treasurer administers all the System's investments in accordance with the Public Employee Retirement System Investment Act, PA 314 of 1965. The main objective is maximizing the rate of return while meeting the actuarial assumptions through maintaining a diverse portfolio, eliminating unnecessary risks, and investing prudently.

The AROR is a key assumption used by the plan actuary in determining the employer contribution rates each year. Due to the adoption of the dedicated gains policy by the retirement board and the DTMB director combined with positive investment experience in fiscal year 2018, the AROR for the pension plan was reduced from 7.00% to 6.70%. The actual rate of investment return for the pension plan in fiscal year 2018 was 11.07%.

The dedicated gains policy reduced the AROR for OPEB from 7.00% to 6.90%. The actual rate of

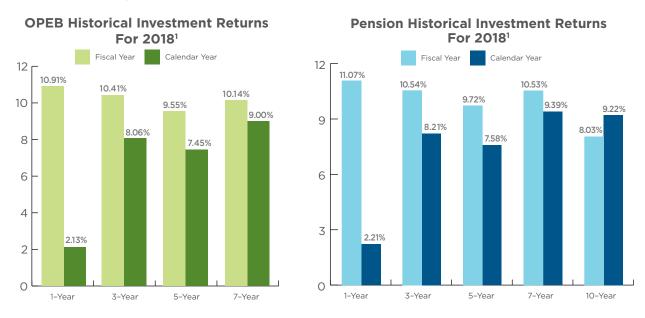


 Department of Treasury, Bureau of Investments report. These figures are shown net of fees. Information shown in the CAFR is shown gross of fees.

investment return for OPEB was 10.91%. All changes to the AROR are reflected in the Sept. 30, 2018, actuarial valuations, but for comparison with current year investment results, the prior-year assumptions are presented in the chart.

## **Historical Investment Returns**

Historical investment returns for both pension and OPEB are presented in the following charts. Because SERS OPEB is in the early stages of pre-funding, longer-term investment results are not available. Over time, as the plan gains more experience, 10-year investment returns will be reported.

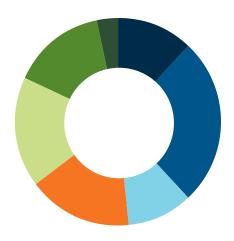


 $1. \ \ \, \text{Department of Treasury Bureau of Investments report.} \ \, \text{These figures are shown net of fees. Information shown in the CAFR is shown gross of fees.} \\$ 

## **Investments And Earnings**

A key function of the investment fiduciary is to ensure the retirement system's investment portfolio is diversified. Having a diverse portfolio helps to maximize investment income responsibly while minimizing risk. Even though market performance may fluctuate, the long-term performance of the retirement system's portfolio is stable.

| Investments and Earnings <sup>1</sup> |                           |                                  |
|---------------------------------------|---------------------------|----------------------------------|
|                                       | Market Value<br>(Dollars) | nvestment And<br>ncome (Dollars) |
| Fixed Income Pools                    | \$<br>1,784,820,797       | \$<br>16,922,891                 |
| Domestic Equity Pools                 | 3,885,796,403             | 680,484,127                      |
| Real Estate and Infrastructure Pools  | 1,554,702,602             | 182,288,972                      |
| Private Equity Pools                  | 2,420,482,537             | 398,917,262                      |
| International Equity Pools            | 2,539,893,283             | 45,850,182                       |
| Absolute Return Pools                 | 2,219,591,847             | 219,009,856                      |
| Short-Term Investment Pools           | 462,394,785               | 9,493,240                        |
| Market Value and Net Investment Gain  | \$<br>14,867,682,254      | \$<br>1,552,966,530              |



Fixed Income Pools - 12.0%

**Domestic Equity Pools - 26.1%** 

**Real Estate and Infrastructure Pools - 10.5%** 

**Private Equity Pools - 16.3%** 

**International Equity Pools - 17.1%** 

**Absolute Pools - 14.9%** 

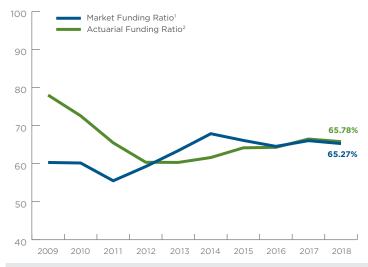
**Short-Term Investment Pools - 3.1%** 

1. CAFR for the Fiscal Year ended Sept. 30, 2018, Page 74.

## **Market And Actuarial Funding Ratios**

#### **Pension**

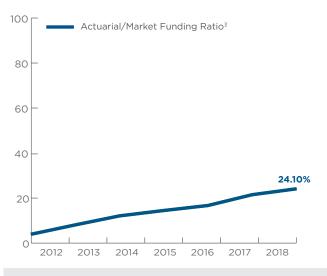
The market funding ratio is based on the market value of assets at fiscal year-end. The actuarial funding ratio is the best practice used by all pension plans nationwide. It incorporates a five-year smoothing period, which minimizes volatility in a pension system's funding requirements.



- 1. Calculated on market value of assets.
- 2. Pension Actuarial Valuation for the fiscal year ended Sept. 30, 2018, Page B-5.

#### **OPEB**

Starting in fiscal year 2013, the System began pre-funding OPEB costs. Pre-funding is a best practice that invests assets and allows investment returns to help fund the plan. Many states do not pre-fund OPEB costs. This reform put Michigan on the leading edge of OPEB funding practices.



3. OPEB Actuarial Valuation for the fiscal year ended Sept. 30, 2018, Appendix 1. Actuarial Value of Assets is equal to the reported market value of assets as of the valuation date.

## **Member And Employer Contributions**

#### **Employer Contributions**

Statute requires the employer to contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level-dollar funding principles so the contributions don't have to increase over time.

### **Definition of Normal Cost**

Normal cost is the cost of the retirement benefit a member earns each year and is set using the AROR in addition to other actuarial assumptions. All active defined benefit plan members contribute toward the cost of their retirement benefits. After member contributions are accounted for, the employer pays the remainder of the normal cost as shown below.

| Member and Employer Pension Contributions <sup>1</sup>   |                 |  |  |
|--|-----------------|--|--|
| Member Contributions   |                 |  |  |
| Weighted Average   | 4.00%           |  |  |
| Employer Contributions   |                 |  |  |
| Normal Cost of Benefits  |                 |  |  |
| expressed as a percentage of valuation payroll   | 5.29%           |  |  |
| UAAL Contribution Rate   |                 |  |  |
| expressed as a percentage of valuation payroll   | 21.33%          |  |  |
| Valuation Payroll  |                 |  |  |
| for Normal Cost  | \$549,109,948   |  |  |
| for Calculated DC employee payroll <sup>2</sup>  | \$2,362,232,928 |  |  |
| for UAAL   | \$2,911,342,876 |  |  |
| Pension Actuarial Valuation for the fiscal year ended Sept. 30, 2018, contributions are displayed as annual dollar amounts in the actuaria     For Calculated DC employee payroll. Projection produced by the Of Employer. | I valuation.    |  |  |

## **Actuarial Assumptions**

Actuarial valuations for both the pension and OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, investment performance, and the healthcare cost trend.

## **Actuarial Assumptions for Fiscal Year Ended Sept. 30, 2018**

| Pension and OPEB <sup>1, 2</sup> |  |
|----------------------------------|--|
| Actuarial Cost Method            | Entry Age, Normal                              |
| Amortization Period              | Closed Period, 16 Years Beginning Oct. 1, 2020 |
| Asset Valuation Method           | 5-Year Smoothed                                |
| Wage Inflation Rate              | 2.75%  |
| OPEB <sup>2</sup>                |  |
| Healthcare Cost Trend Rate       | 8.25% Year 1 Graded to 3.50% Year 9            |
| AROR—Closed Plan <sup>3</sup>    | 6.90%  |
| Amortization Method              | Level Percent of Payroll                       |
| Pension <sup>1</sup>             |  |
| AROR—Closed Plan                 | 6.70%  |
| Amortization Method              | Level-Dollar                                   |
|                                  |  |

- 1. SERS Pension Actuarial Valuation for the fiscal year ended Sept. 30, 2018.
- 2. SERS OPEB Actuarial Valuation for the fiscal year ended Sept. 30, 2018.
- 3. The legacy premium subsidy plan closed to employees first hired on or after Jan. 1, 2012. These employees participate in the Personal Healthcare Fund and may become eligible for a lump sum payment into a Health Reimbursement Account upon their first termination from employment (\$1,000 with at least 10 years of service, if under age 60; \$2,000 with at least 10 years of service, if age 60 or older). These employees have the option of enrolling in state retiree healthcare at full cost at termination.

### **Investment Service Providers**

A service provider is any individual, third-party agent or consultant, or other entity that receives direct or indirect compensation for consulting, investment management, brokerage, or custody services related to the System's assets.

5AM Ventures **Accel Partners** 

Advent International Corp. **AEW Capital Management Affinity Equity Partners** Ancora Advisors

Aon Hewitt

Apax Partners Worldwide LLP Apollo Capital Management Apollo Global Management

Apollo-Stonetower Arboretum Ventures **Arclight Capital Partners** 

Ardian

Ares Management LLC Ark Investments Asana Partners

Attucks Asset Management Avanath Capital Management Axiom Asia Private Capital

Bank of Montreal **Barclays Capital** 

**Barings** 

Basalt Infrastructure Partners

BB&T Capital Markets

**BC** Partners

**Beacon Capital Partners** 

Bentall Kennedy Beringea

Berkshire Partners LLC

**BGC Financial** 

**Bivium Capital Partners** 

Blackrock

BlackRock Financial Management Blackstone Alternative Asset

Management Blackstone Group **BMO Capital Markets** 

**BNP** Paribas **BNY Convergex BOA-Merrill Lynch Bridgepoint Capital**  **BroadRiver Asset Management** Brookfield Asset Management Inc.

BTIG

Cantor Fitzgerald

Capital Institutional Services Capri Capital Partners Carlyle Group LP

Carlyle Investment Management

Centerbridge

Centerbridge Capital

Cerberus Capital Management LP Charlesbank Capital Partners CIE Management-BC Partners CIM Investment Advisors Citigroup Global Markets

Clarion Partners

Clarkston Capital Partners

Coller Capital

Columbia Management CoStar Realty Information Inc.

Cowen & Co. Credit Suisse

Credit Suisse-Commercial Paper

Crescent Capital Group Crescent Direct Lending **CVC Capital Partners** Czech Asset Management

DA Davidson

Dalmore Capital Limited

Deutsche Bank Dodge & Cox

**Domain Capital Advisors** Domain Mercury/Ploutos

Drexel Hamilton Effissimo Elegantree Fund EnCap Investments LP

EnTrust Capital

FirstMark Capital

Fidelity Institutional Asset Management (fka Pyramis) FIMI Opportunity Funds

Fisher Investments Five Star Realty Partners

Flagship Ventures

Fortress Investment Group Fox Paine & Company LLC Freeman Spogli & Co.

**FTN Financial Gateway Capital** Genstar LLC Goldman Sachs

**Greenspring Associates** 

**Grosvenor Capital Management** 

**GSO Capital Partners** H.C. Wainwright

HarbourVest Partners LLC HarbourVest TOPE LLC Harvest Partners LLC

Heitman Capital Management Highbridge Principal Strategies

Hilltop Securities

Hopen Life Sciences Ventures HPS Investment Partners III LLC Huron Capital Partners LLC

ICG Advisors

InSight Venture Partners

Invesco Ltd. Jana Partners

JANA Special Situations Management

**JPMorgan** 

JP Morgan Asset Management

JP Morgan Private Equity Fund Services

Kavne Anderson **KBS** Realty Advisors Kelso & Company

Kensington Realty Advisors Kevin Miller Financial Services

Khosla Ventures

Kohlberg, Kravis, Roberts & Co.

L&B Realty Advisors Landmark Realty Advisors LaSalle Investment Management Lazard Asset Management

## **Investment Service Providers, Continued**

Lead Edge Capital

Leonard Green & Partners LP

LGT Capital Partners Lightspeed Ventures Lombard International Life Assurance Company

Lonestar

Loomis Sayles & Company
Los Angeles Capital Management
Lubert-Adler Management Company

Marathon Asset Management

Marathon London

 ${\sf MarketAxess\ Corporation}$ 

Martin Currie

Matlin Patterson Global Advisors

MBS Securities

Mellon Capital Management Menlo Management Partners

Merit Energy

Meritech Capital Partners

Mesirow Financial

Metropolitan West Asset Management

MFR Securities

MI Growth Capital Partners SBIC

Mischler Financial Group

Morgan Stanley

Morgan Stanley Smith Barney LLC

Multi Bank Securities Inc.

Munder Capital Management AKA

Victory Capital Management Napier Park Global Capital Natural Gas Partners New Leaf Venture Partners

Nordic Capital
Northpointe Capital
Oak Investment Partners

Oaktree Capital Management LLC

Oppenheimer

Orchard Global Asset Management

Orion Resource Partners

OTA Ltd. Partnership

Paladin Realty Partners

Parallel Resource Partners Parthenon Capital Inc.

Peninsula Capital Partners LLC

Permira

PIMCO

Piper Jaffray Pitchbook

Pregin

Principal CMBS

Principal Financial Group

Pritzker Group

**Proprium Capital Partners** 

Prudential

Prudential Fixed Income Public Pension Capital

R.W. Baird Raymond James RBC Capital Markets

Rhone Capital Rialto Capital

Ridgewood Capital Management

Renaissance Venture Capital

Ridgewood Energy

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SK Capital Societe Generale Southwest Securities Sprott Resources State Street Bank

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Tradition Securities
Transwestern Investment

Management

Trilantic Capital Management LLC True North Management Group

Trusted Insight

TSG Consumer Partners

Turnbridge Capital Management LLC

U.S. Bank

Veritas Capital Fund Management LLC

Vida Capital Inc.

Visium Capital Management

Vista Equity Partners Warburg, Pincus LLC Warwick Energy Group

Wayne Co.

Wellington Trust Company

Wells Fargo

Western National Group



### **Office of Retirement Services**

Department of Technology, Management and Budget Kerrie Vanden Bosch, director

### **Our Purpose**

ORS is an innovative retirement organization driven to empower our customers for a successful today and a secure tomorrow.

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